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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,161	12/18/2001	Kazuya Suzuki	0229-0681P	9259
2292	7590	11/06/2003	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			KNABLE, GEOFFREY L	
			ART UNIT	PAPER NUMBER

1733

DATE MAILED: 11/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

cb7

Office Action Summary

Application No.

10/020,161

Applicant(s)

SUZUKI, KAZUYA

Examiner

Geoffrey L. Knabl

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other:

1. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 3-10, reference is made to "determining a cross sectional shape", "allotting thicknesses and widths..." and "determining relative displacements..." However, in the actual physical step in the claim (lines 11+), no clear reference is made back to these steps in lines 3-10, or more particularly to the results of these steps, such that it is not clear whether or how the results of these steps are used in the method. Although it is assumed the intent is that the resultant cross-sectional shape as well as allotted thickness/widths and determined displacements are actually used, it would be clearer if this were more explicitly defined within the context of the actual physical method. In other words, the present language can seemingly be read as *not* requiring that the strips be piled up to form the cross sectional shape of the component or that the shift in the joints is that determined as a relative displacement. Again, however, for purposes of this office action, the claims have been read as requiring that the final step be linked to the earlier steps such that the strips are piled up to form the cross-sectional shape of the components and has joints shifted to the determined displacements. Clarification is however required.

In claim 2, the phrase "angularly shift" is awkward and confusing. Also, in line 2, the stray "s" should be put with "joint".

In claim 6, the term "comprising" has an extra space therein.

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2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katagiri et al. (US 3,898,116) or Yoshida et al. (US 5,667,610) or Kumagai (US 4,875,959) taken in view of Minami et al. (US 5,688,343) and/or Smithkey, Jr. (US 3,657,039).

Each of Katagiri et al. (e.g. note esp. fig. 4), Yoshida et al. (note esp. "Z" in fig. 1) and Kumagai et al. (note esp. figs. 1-4) clearly discloses forming tire component assemblies that include a plurality of longitudinally shifted strips that are wound on a cylindrical assembly drum and when joined on the drum, the jointed ends will clearly be circumferentially shifted as claimed. The claimed determining and allotting steps are considered implicit or in any event obvious features in the reference teachings insofar as the selection of the strips to be assembled (as would certainly be required to practice the disclosed methods) would or certainly should have been made based upon desired shape/dimensions/structure of the finished component assembly. These references are thus considered to suggest/render obvious each of the claimed features except that the references do not indicate what the strip thicknesses are. It however is submitted that the ordinary artisan would have readily appreciated that strip thickness for plies of the types described in the references would have normally and typically been within the claimed 0.5-4mm range, at least for normal passenger tires, selection of components

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with thicknesses as claimed being therefore obvious. Minami et al. (note the various dimensions mentioned throughout) and Smithkey, Jr. (note esp. col. 4, lines 1-7) are provided as further evidence in support of the conventional nature of strip thicknesses within the claimed range.

As to claim 2, Katagiri shows a shift of 120 degrees (fig. 5) and thus satisfies this claim while Yoshida et al. and Kumagai do not provide details of the magnitude of the actual shift in degrees beyond what is illustrated in the figures. It would however have been obvious to assure a certain minimum amount of shift so as to effectively avoid stress concentration, providing a shift of greater than the claimed 5 degree lower limit therefore being considered to have represented an obvious selection. Further, the depicted dimensional shift in the references would further seem to have suggested larger amounts of shift than 5 degrees. The claimed 180 degree upper limit will of course always be met as two joints clearly cannot be shifted from one another by more than 180 degrees. As to claim 3, insofar as each reference is assembling different strips of differing type/position/width, it would have been obvious for the artisan to form such from different rubbers if desired to optimize their properties based upon their position in the tire, it being of course well known in this art to form tires from a variety of different rubber compounds optimized or selected by their position in the tire. A tire and method of making it as required by claims 6-7 is also obvious for the same reasons advanced against claim 1.

4. Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riggs (US 4,276,104) taken in view of Costemalle et al. (US 5,376,438).

Riggs discloses a method for making tire component assemblies that include a plurality of longitudinally shifted strips that are wound on a cylindrical assembly drum so that when joined on the drum, the jointed ends will be circumferentially shifted as claimed (e.g. note figs. 1-4). The claimed determining and allotting steps are considered implicit or in any event obvious features in the reference teachings insofar as the selection of the strips to be assembled (as would certainly be required to practice the disclosed methods) would or certainly should have been made based upon desired shape/dimensions/structure of the finished component assembly. This reference is thus considered to suggest/render obvious each of the claim 1 features except that the reference does not indicate what the strip thicknesses are. It however is submitted that the ordinary artisan would have readily appreciated that strip thicknesses for components of the types described in the reference (e.g. sidewalls, chafers - col. 2, lines 42+) would have normally and typically been within the claimed 0.5-4mm range, at least for normal passenger tires, selection of components with thicknesses as claimed being therefore obvious. Costemalle et al. has been cited as further evidence that, with respect to sidewalls in particular, and especially sidewalls that include more than one strip each (i.e. requiring application of two pairs of strips as in Riggs), typically would have thicknesses within the claimed range - note esp. col. 11, lines 5-14.

As to claim 2, Riggs suggests that the transfer drums are rotated a predetermined amount to offset the ends (col. 3, lines 66+) but does not describe an actual angle of offset other than what is illustrated in fig. 4. The guidance provided by this figure however would have suggested to the artisan and thereby rendered obvious

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an amount of offset greater than the claimed 5 degree lower limit as claimed. The claimed 180 degree upper limit will of course always be met as two joints clearly cannot be shifted from one another by more than 180 degrees. As to claim 3, in assembling for example a sidewall from two strips (as in Costemalle et al.), use of different compounds would have been obvious as suggested by Costemalle et al. As to claim 4, as already noted, sidewall rubber of thicknesses as claimed is suggested/rendered obvious by Riggs/Costemalle et al. A tire and method of making it as required by claims 6-7 is also obvious for the same reasons advanced against claim 1.

5. Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deist (US 3,223,573).

Deist discloses forming a tire tread as well as sidewalls by winding a plurality of thin strips on a cylindrical carcass (e.g. fig. 4), each strip being jointed, which joints further can be staggered around the circumference of the tire (e.g. col. 1, lines 22-32). The claimed determining and allotting steps are considered implicit or in any event obvious features in the reference teachings insofar as the selection of the strips to be assembled (as would certainly be required to practice the disclosed methods) would or certainly should have been made based upon desired shape/dimensions/structure of the finished component assembly. This reference is thus considered to suggest/render obvious each of the claim 1 features except that the reference does not indicate what the strip thicknesses are; the reference does however stress that the strips are "relatively thin" strips (col. 2, lines 24-25) and further the reference is clearly directed to breaking the tread application up into a series of strip windings rather than a single solid

strip. It is submitted that the ordinary artisan would have readily appreciated that strip thicknesses for components of the types described in the references (e.g. undertread, base tread, sidewalls, shoulder) would have normally and typically been within the claimed 0.5-4 mm range, at least for normal passenger tires, selection of components with thicknesses as claimed being therefore obvious.

As to claim 2, as already noted, Deist suggests staggering the ends to avoid material build-up at any given point on the circumference but does not describe an actual angle of offset. It is submitted however that at degree shift of greater than 5 degrees would have been obvious to ensure that sufficient space is provided between the joints. The claimed 180 degree upper limit will of course always be met as two joints clearly cannot be shifted from one another by more than 180 degrees. As to claim 3, Deist clearly suggests use of different compounds for the different strips. As to claim 4, as already noted, tread and sidewall rubber are suggested by Deist, the claimed thicknesses likewise being considered obvious for reasons noted above. A tire and method of making it as required by claims 6-7 is also obvious for the same reasons advanced against claim 1.

6. Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ragan (US 3,472,714) taken in view of Deist (US 3,223,573) and optionally further in view of Montagne (US 3,907,019).

Ragan discloses forming a tire tread by winding a plurality of strips on a cylindrical carcass, each strip being jointed (e.g. col. 3, lines 64+). The claimed determining and allotting steps are considered implicit or in any event obvious features

in the reference teachings insofar as the selection of the strips to be assembled (as would certainly be required to practice the disclosed methods) would or certainly should have been made based upon desired shape/dimensions/structure of the finished tread assembly. This reference does not however indicate the relative positions of the joints. It however is submitted that the ordinary artisan would have found it to have been prima facie obvious to stagger the joints around the circumference in order to avoid material build-up at any particular location on the circumference, reference being made for example to Deist as evidence of this known expedient - note col. 2, lines 22-32. As to the strip thicknesses, Ragan suggests that the strips are less than one half inch in thickness but "may be as thin as may be conveniently formed" (col. 3, lines 40-42), this being considered to render thicknesses as claimed obvious. Further, in light of Montagne, also directed to forming a tread from superimposed wound strips, strips thicknesses as claimed are known to be suitable and effective - note esp. col. 4, lines 55-57 and col. 6, lines 40-44. As to claim 2, as already noted, Deist suggests staggering the ends to avoid material build-up at any given point on the circumference but does not describe an actual angle of offset. It is submitted however that a degree of shift of greater than 5 degrees would have been obvious to ensure that sufficient space is provided between the joints. The claimed 180 degree upper limit will of course always be met as two joints clearly cannot be shifted from one another by more than 180 degrees. As to claim 3, it is extremely well known and common in this art to provide the tread to include different compounds, e.g. as a cap and base construction, for well known performance advantages, use of such being therefore obvious. Note

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also that Deist clearly suggests use of different compounds for the different strips. As to claim 4, as already noted, tread rubber is suggested by Ragan, the claimed thicknesses likewise being considered obvious for reasons noted above. A tire and method of making it as required by claims 6-7 is also obvious for the same reasons advanced against claim 1.

7. Claims 1, 2 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harsel (US 1,406,855) or Wild (US 3,982,578) taken in view of Deist (US 3,223,573).

Harsel (note esp. "43" in fig. 4) and Wild (note esp. 33/34 in fig. 8) disclose tire bead apexes formed into the desired shape from an assembly of thin rubberized strips. Further, it would have been readily apparent that joints would typically and normally be present to form the components in annular form but specifics of the joints, and particularly their relative positions, are not given. It is however submitted that the ordinary artisan would have found it to have been prima facie obvious to stagger the joints around the circumference in order to avoid material build-up at any particular location on the circumference, reference being made for example to Deist as evidence of this known expedient - note col. 2, lines 22-32. As to the strip thicknesses, it is submitted that the ordinary artisan would have readily appreciated that strip thicknesses for the illustrated plurality of strips used to form the apex components would have normally and typically had to have been generally within the claimed 0.5-4 mm range, at least for normal passenger tires, given the guidance provided by the illustrated strips in the references coupled with the normal expected or required overall size for such

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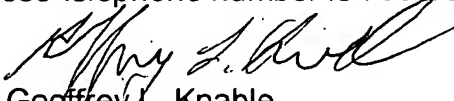
components in normal and typical tires, selection of components with thicknesses as claimed being therefore obvious.

As to claim 2, as already noted, Deist suggests staggering the ends to avoid material build-up at any given point on the circumference but does not describe an actual angle of offset. It is submitted however that a degree of shift of greater than 5 degrees would have been obvious to ensure that sufficient space is provided between the joints. The claimed 180 degree upper limit will of course always be met as two joints clearly cannot be shifted from one another by more than 180 degrees. As to claim 5, as already noted, a bead apex formed from plural strips is disclosed by both Harsel and Wild, the claimed thicknesses likewise being considered obvious for reasons noted above. A tire and method of making it as required by claims 6-7 is also obvious for the same reasons advanced against claim 1.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 703-308-2062. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.


Geoffrey L. Knable
Primary Examiner
Art Unit 1733

G. Knable
October 31, 2003